**NATURAL RESOURCES CONSERVATION SERVICE**

# DEEP TILLAGE (ACRE)

# CODE 324

**MONTANA CONSERVATION PRACTICE SPECIFICATION**

**DEFINITION:** Performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil.

**PURPOSE:** This specification provides guidelines for proper design and implementation on lands having adverse soil conditions or restrictive layers which inhibit plant growth and/or water infiltration. Implementation of this practice will temporarily alleviate problems associated with restrictive layers increasing water penetration into the subsoil and improving aeration. Where sediment deposition is a concern, this practice alleviates problems symptomatic of erosion that may need to be addressed to correct the problem.

Deep tillage should be completed when soil moisture is less than 30 percent to properly shatter compacted layers caused by previous tillage operations or vehicular traffic. Depth of restrictive layers must be determined with the use of a soil moisture probe, auger, shovel, or other suitable device capable of identifying compacted layers that may impede water percolation or plant growth.

Where deep tillage will be completed at depths greater than 16 inches, equipment designed specifically for this purpose is highly recommended. Varying the tillage depths associated with crop production may reduce frequency of deep tillage. Where restrictive layers occur at depths greater than 16 inches, the introduction of deep-rooted crops in the rotation and proper crop residue use will enhance water infiltration and positively effect subsoil fertility levels and plant root growth.

Due to the potential for increased water erosion hazards, deep tillage should be completed across the slope on soils with gradients greater than 5 percent. Additionally, where hazards exist concerning ground water contamination due to leaching (identified with WIN_PST), precautions should be exercised that minimize the risk of ground water degradation.

Consider using points from 2–4 inches in width for best results when breaking restrictive layers. Although spacing will depend greatly on local conditions, chisel points from 12–24 inches apart are optimum for breaking restrictive layers to 18 inches.

## Specification MT324-2

**NO INFORMATION**